Crabtree Surveying LLC
7328 104th St. E.
Puyallup, WA 98373
Tel: 253-732-9591
office@crabtreesurveying.com

January 11, 2012

To: Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th St. SW
Washington, DC 20554

Re: LightSquared Subsidiary, LLC
Ex Parte Communication. IB Docket No. 11-109
IBSF File No. SAT-MOD-20101118-00239

I've been periodically following the LightSquared vs. GPS issue since sometime last summer and, quite frankly, didn't pay much attention because I didn't even consider it to be plausible that the FCC would permit LightSquared to interfere with the existing satellite-reserved frequency band(s), especially the GPS signal. I figured at a minimum, even if the FCC was willing to ignore their own regulations or the good of the population in general, that the military would simply squash any chance for GPS interference. Apparently and perplexingly, it has not been so simple, so I find it necessary to voice my objections to allowing anyone to degrade such a well established and necessary tool as GPS.

I am a Professional Land Surveyor trying to struggle through the current economy. Having worked for another land surveying company for the past 17 years, I've just recently found myself out of a job because the economy has reduced that company to bankruptcy. In lieu of just living on unemployment like many other people are willing to do, I've taken action and started my own one-person land surveying company. Trying to compete with established surveying companies and working alone has required my investment in very expensive equipment, including high-precision GPS, which costs range between $10,000 to $50,000 or more, depending on the needs, application and age. In addition to the enormous costs for the high-precision GPS equipment, the poor economy has brought project prices down to unreasonable lows so it is very difficult to be able to actually make any money on a given project, even with the current GPS signal.

I find it appalling that the FCC would even consider putting the GPS signal at risk, even minimally, by allowing anyone to construct a terrestrial system of signal-depreciating or jamming structures, with portable signal jammers soon to be in the hands of a significant portion of the nation's population. The current GPS signal enables the high-precision equipment to be used in most cases where minimal obstructions exist (trees, buildings, etc.), but even now it can be difficult to get an adequate signal for the necessary accuracy required in land surveying, in some situations it just barely works.

LightSquared's proposed solution of 'just adding ±$10 filters to existing equipment' is absurd. Not only does adding a filter to high-precision equipment require countless hours of expensive technical work that I cannot and every existing user should not pay for, it reduces the strength of the already small signal that the antenna actually receives. LightSquared's accusation that the GPS industry should have previously filtered out the subject frequencies is not only impossible in some cases, but ridiculous, since those frequencies adjacent to GPS have been and should remain reserved for similar and potentially user-applicable satellite signals, which are completely compatible.

Getting a sufficient signal to place your car on the street is not the same as trying to measure a property corner monument with millimeter accuracy. Having even a minute signal loss in those situations would make the GPS unusable, causing the necessity for backtracking and using manual terrestrial equipment, resulting in countless hours/days of work to be done where it was not expected to be necessary. When

projects are billed with thin profit margins, this can be extremely detrimental to any company. Even if those unexpected costs can be recovered by the surveying company, the project itself becomes more costly, affecting the typical landowner's meager funds or the developer's profit margin and sometimes ultimately making the difference between whether a project is feasible or not. Even in a healthy economy, the additional expense would be detrimental to every industry, consumer and government agency affected by the increased cost of collecting and/or providing survey data, including GIS. Since most surveyors have and use this same type of high-precision GPS equipment, I'm sure that all would agree that any signal loss is completely unacceptable.

The simple fact that the proposed terrestrial usage of the satellite-reserved frequencies by LightSquared has been proven to disrupt or adversely affect so many established industries, emergency response organizations, consumers, and the population in general should make it very simple to deny their request. The obvious solution is for LightSquared to use a different frequency reserved for terrestrial, not satellite usage.

Thank you for your time and consideration in this matter.

James H. Crabtree, PLS